

# ACADEMY

Newsletter



CALIFORNIA  
ACADEMY OF SCIENCES

FEB 18 1994

LIBRARY

## Students With a Flair for Science

Come see what this year's young scientists hold for the future. The San Francisco Bay Area Science Fair showcases the winning science projects of junior and senior high school students. Over 300 projects will be on display after 3 pm March 17 to the 23rd.

The aim of the fair is to promote interest in science and to

encourage original thinking. The students, from eight

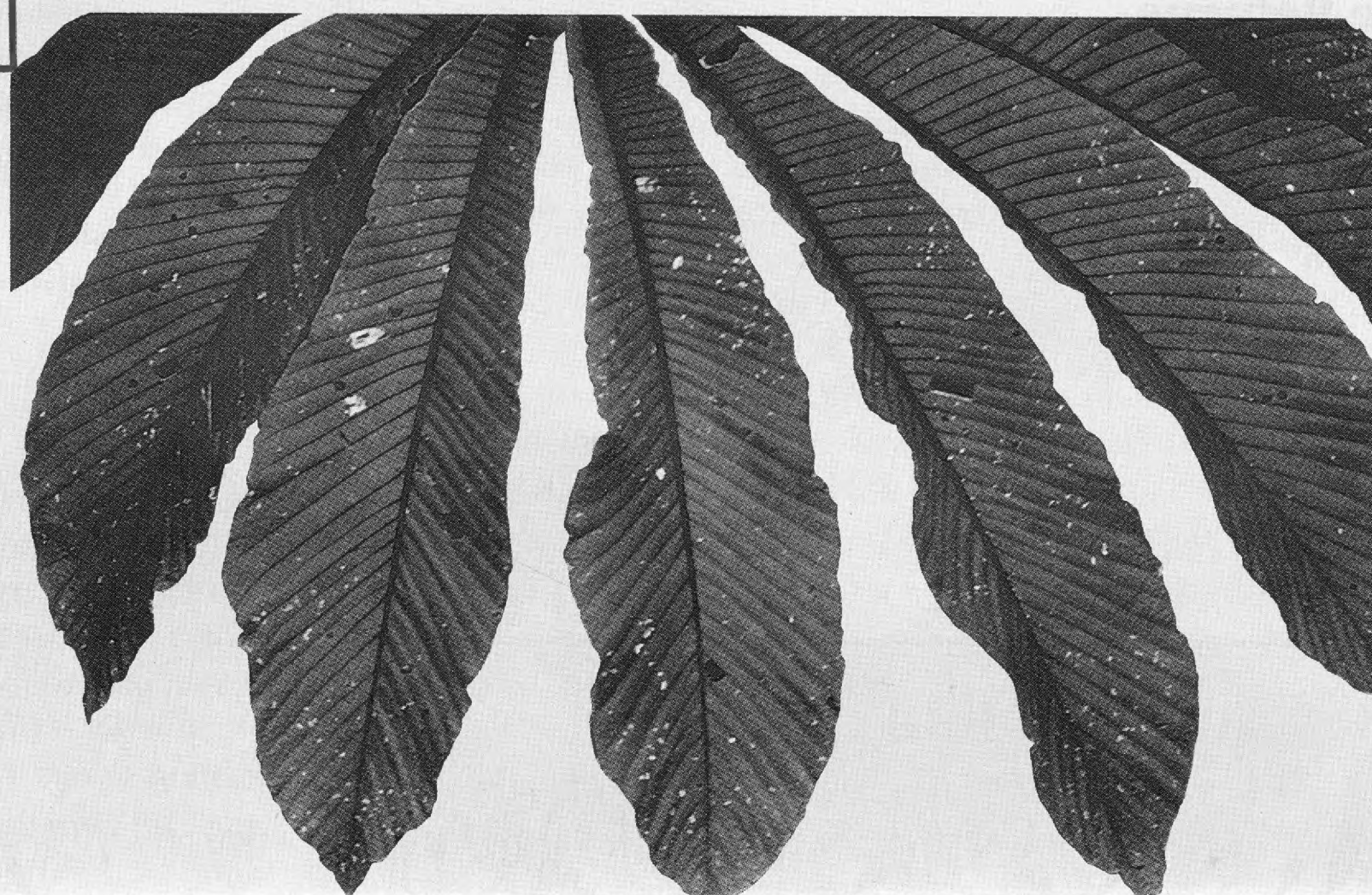
Bay Area counties, develop original scientific experiments and work them into project form in one of four categories: behavioral sciences, biological sciences, math and computers, and physical sciences and engineering.

For judging purposes, African Hall, African Annex and Lovell White Hall (Birds of a Feather) will be closed to the public and members on March 17, until 3 pm and from 10 am until noon on March 19.

## Evening Bus Riders Get a Lift

For those members who take the bus to evening members meetings, we're offering a new service. With prior arrangement, we will try to provide a ride from the Academy to your MUNI stop following the evening meetings. Please call ahead to make arrangements, at 750-7111.

members meeting



## THE PROMISE OF THE RAIN FOREST

Wednesday, March 9, at 2 and 7:30 pm, with Douglas Cheeseman Jr.

Explore rain forests from the Amazon River area in Peru and Brazil to Costa Rica, Trinidad and Venezuela, by joining Douglas Cheeseman Jr. in a voyage to the heart of the earth's rain forests. Cheeseman, a biologist, educator and photographer, also will touch on the rain forest areas in Malaysia, Indonesia, Madagascar and Australia.

He'll center his discussion on the ecology and interrelations of mammals, birds, insects and plants that inhabit these fragile and diverse areas. With catching enthusiasm, he'll emphasize the importance of rain forest survival to maintain water tables, biodiversity and their benefit to humans, such as potential medicinal value; uses for local people and aesthetic value.

Cheeseman has taught zoology and ecology at De Anza College for 25 years and is an active member of the Santa Clara Audubon Society.

Please present your membership card at the Academy entrance and again at the Morrison Auditorium for the 2 pm meeting. The 7:30 pm meeting will be held in Wild California. The Academy Store will not be open for this evening meeting. Members meetings are free to members and are a benefit of your Academy membership.



## Out of This World Academy Ball

Enjoy an evening of dining, dancing and festive entertainment at the Academy's ninth annual black tie fund-raising ball "Out of This World," held Thursday, April 28, 6:30 pm to 12:30 am. Mr. and Mrs. Richard Thieriot are



this year's dinner chairs.

Festivities will take place in the Steinhart Aquarium, African Hall, Wild California, Earth and Space Hall, and the exciting exhibit STAR TREK®: Federation Science in Wattis Hall. Tickets begin at \$200 per person. For more information, please call 750-7221.

## Costumes from the Cosmos

Xizij-snort ergplo frus-haugh! Get out the green makeup, third eyeball and spiked tail for the Academy's Science Fiction Costume Contest for kids on Saturday, March 26 at 1 pm. Dress as your favorite earth or extraterrestrial science fiction character — or, create a new unique species.

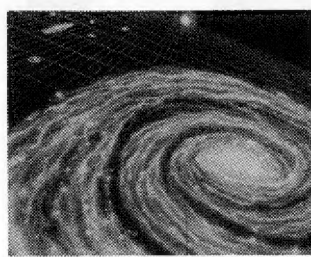
Prizes will be given for best group in costume, most original costume and most accurate (for those based on existing characters) in each age group: 5 and under, 6-8, 9-12 and 13-15.

Judging will take place in the central courtyard, or in Cowell Hall if it rains. Call 750-7100, for more information.



## Window on the Universe

In June of 1992, NASA launched a satellite that has provided scientists with unique opportunities to examine the last unexplored band of the light spectrum. Using state-of-the-art technology, NASA's Extreme Ultraviolet Explorer (EUVE) has produced a detailed all-sky survey and spectroscopic observations in the extreme ultraviolet region of the light spectrum.



Join University of California research scientist and education coordinator Dr. Isabel Hawkins on a voyage through the galaxy as we explore the history and discoveries of EUVE's scientific instruments. In its first year of operation, the EUVE has detected extragalactic sources from the farthest reaches of our universe, hundreds of white dwarfs and active cool stars, supernovae remnants, flaring stars and novae in outburst.

Mar. 22, 7:30 pm; Tickets \$2 each

Exploring the Universe Series: use coupon for advance tickets. Tickets available at the door on first-come, first-serve basis. For more information about other programs in this series, call 750-7141.

## Galileo's Universe Returns

Follow in the footsteps of Italian scientist Galileo Galilei and share in the rediscovery of the secrets of our own moon, the planets and the galaxy. Galilei revolutionized astronomy with the introduction of the telescope in the early 17th century. His observations of the moon and Jupiter's satellites were the first empirical evidence that the planets rotated around the sun.

Opens March 5 and runs through June 30. Shows are at 1 and 3 pm on weekends.

**Current Sky Shows:** "Orion Rendezvous: A STAR TREK Voyage of Discovery," 2 pm daily, with additional weekend shows at 4 pm; "Galileo's Universe," weekends at 1 and 3 pm; "Touch the Stars," weekends at 11 am; and "Startalk," weekends at 12 pm. For more information, call 750-7141.

## Supercussion

You're sure to be fascinated and surprised at the musical tones the group Supercussion can create with everyday objects on their vast array of percussion instruments. This unique percussion group uses everything but the kitchen sink to perform selections of classical, rap, movie and cartoon music.

— Sunday, Mar. 13

This family series is presented in the auditorium. Free after general admission. For more information, call 863-1719.

YOUNG AUDIENCES



Allen Nomura



ACADEMY TRAVEL

## Alaska Kayak

Due to the popularity of this previously announced trip we have added a second departure, July 9 to 17. Join trip leader Joe Brennan for nine days of camping and kayaking in the gorgeous and remote Myriad Islands on the Alaska coast. A maze of narrow, shallow passages among hundreds of islands offers a continual change of scenery and kayaking conditions.

Cost: \$2,215, plus airfare

Minimum age: 12 (plus height requirement), must be accompanied by an adult

## Canada & Coastal Maine

September 3-17

With Dr. Rich Mooi

From Canada's Maritime Provinces to the Bay of Fundy and Coastal Maine, this voyage introduces you to regions of singular scenic and historic interest. Aboard the *Nantucket Clipper*, we'll explore the bays and inlets of Prince Edward Island,

the rugged grandeur of Nova Scotia and two charming towns in New Brunswick. Along Maine's coast enjoy the pure scenic splendor of windswept cliffs, evergreen forests and glacial lakes.

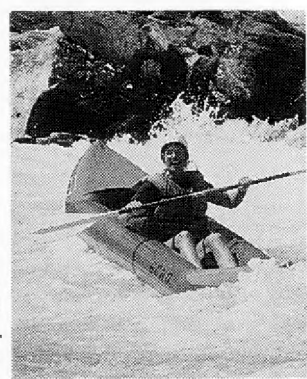
Cost: \$3,770-\$5,480 per person, plus air (double occupancy)

## Rafting the Salmon River

July 30 to August 5, 1995

With Greg de Nevers

The longest free-flowing river in the contiguous United States, the Salmon River, in central Idaho, has carved the

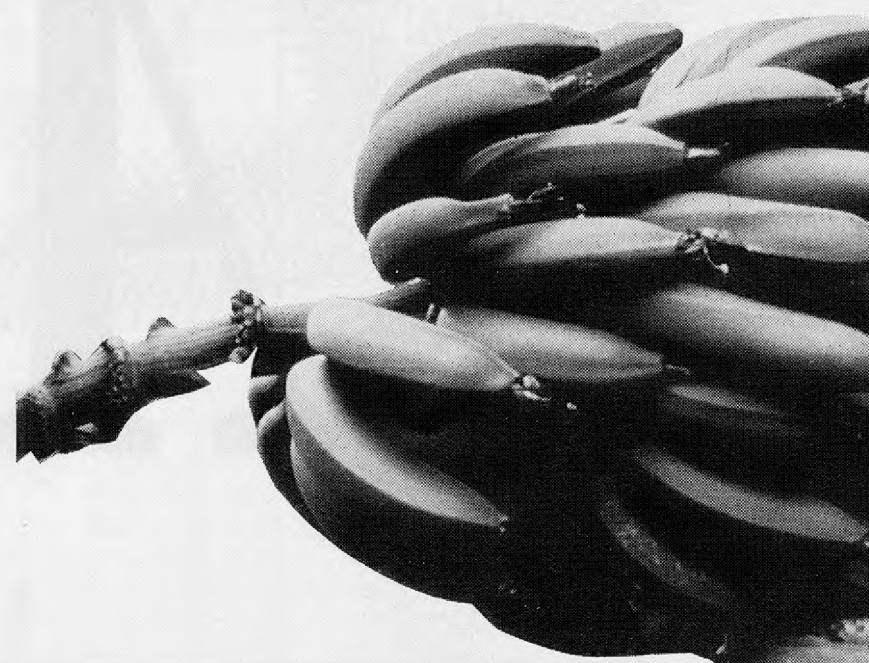


Mary Ann Harrel

second deepest canyon in North America. Enjoy the middle fork's great white water, spectacular scenery, abundant wildlife and fantastic fishing.

Cost: \$1,267, plus \$347 airfare (subject to change). Minimum age: 7 (must be accompanied by an adult).

For detailed itineraries on these and other tours, please call the travel office at 750-7348.



Lectures are presented in the auditorium by experts in various aspects of natural history. Use coupon for tickets. Call 750-7128, for information.

## Sacred Peak

The great volcanoes of East Africa give rise to a sense of Kenya and Kilimanjaro, have played important roles as

The Kikuyu, the largest and most influential tribe in I abode of the supreme deity, Ngai. The Chagga who live c eternal embodiment of all that is good and nourishing in

Join Dr. Edwin Bernbaum, mountaineer and scholar triguing stories, beliefs and religious practices surrounding April 14, Thursday, 7:30 pm — \$6 members/\$8 nonmem

## Animal Play in B

The "useless activity" of play appears to be so important frolicsome behaviors have to do with individual survival

Dr. Robert Fagen, associate professor at the Univers on the subject of play in animals. In this video-illustrated (grizzly) play in Alaska and show how play raises basic April 12, Tuesday, 7:30 pm — \$6 members/\$8 nonmem

## "N" is a Number: A

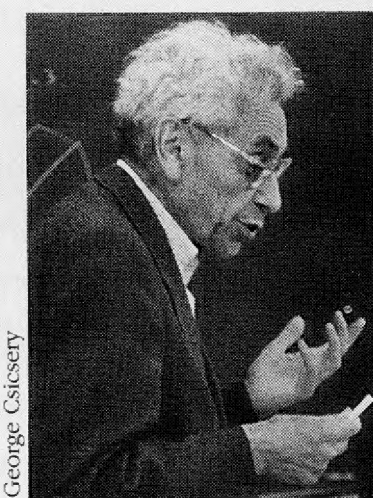
A wandering genius who spends most garian-born Paul Erdős is the most p

We've joined forces with the Filr one-hour documentary film on Erdős. circuit by presenting the philosophical

This event is produced under th Hungary with the Hungarian-Americ at FAF (346 Ninth Street, 2nd Floor, more information, contact FAF at 5

April 8, 7:30 pm, Friday premiere: \$8

April 9, 3 pm, Saturday screening: \$5 CAS & FAF members



George Csicsery

## Brown Bear/H

Funded by the National Geographic Society, Johanna Fa human interactions at Pack Creek, Admiralty Island in so Gleaned from detailed behavioral analyses of over 300 b salmon stream, Fagen shows that brown bears and hum half a century. Learn what behavior mechanisms might j April 6, Wednesday, 7:30 pm — \$6 members/\$8 nonmen

## Lectures

Don't forget these March lectures, previously announced i **Frontier**, with Dr. Millie Hughes-Fulford, to explore space **Space Warps and Time Machines**, with Andrew Fraknoi bizarre cosmic objects — Mar. 30; and **The Ecology of Co** the environment through business — Mar. 31.

All lectures begin at 7:30 pm and cost \$6 members/\$8 Fulford and Hawken lectures, 6 pm, at a cost of \$30 memb







Dr. Edwin Bernbaum

## of East Africa

mystery. The highest and most famous of these peaks, Mount  
red mountains of major cultural and historical significance.  
Kenya, long revered the summit of Mt. Kenya as the principal  
on the slopes of Kilimanjaro view its massive summit as the  
their lives.  
of comparative religion and mythology, to explore the in-  
the mountains.

## ological Perspective

that animals literally risk their lives for it. What do these  
and evolution?  
ty of Alaska Fairbanks, is one of the foremost authorities  
lecture, he'll present results from his studies of brown bear  
evolutionary questions about animal and human nature.

## Portrait of Paul Erdős

of his time traveling from math meeting to math meeting, Hun-  
rolific mathematician who has ever lived.  
Arts Foundation (FAF) to premiere film maker George Csicsery's  
The film highlights the witty Erdős during his continual lecture  
and personal dimensions of Erdős' unique mathematical quest.  
e patronage of the Honorary Consulate of the Republic of  
n Chamber of Commerce. Tickets are available after March 1  
(San Francisco), or via charge-by-phone at 552-FILM. For  
2-8760.  
CAS & FAF members/\$10 nonmembers  
\$6 nonmembers

## uman Interactions

gen has been studying brown bear and  
utheastern Alaska for over a decade.  
ear and human interactions at this small  
ns have interacted peacefully for over  
roduce such a long-term coexistence.



## This March

the January and February newsletters: **Science: The Final**  
light and the future of medical science – **Mar. 9; Black Holes,**  
for a glimpse into the weird and wonderful world of these  
**mmerce,** with Paul Hawken, for a look at the restoration of  
nonmembers. There also will be receptions for the Hughes-  
rs/\$35 nonmembers. Please use coupon to order tickets.

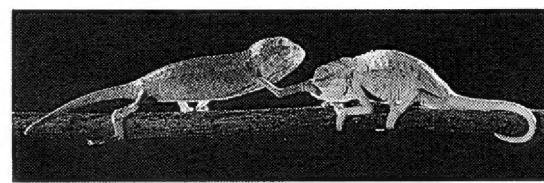
## ADULT & FAMILY EDUCATION

### Natural History of the Eastern Mojave Desert

Join us for a desert extravaganza where you'll explore the Providence Mountains, Mitchell Caverns, Kelso Dunes, Soda Dry Lake and Death Valley. Bill Randolph and Mona Bourell will share their expert knowledge about the flora and fauna and geology found along the way. You'll camp under the stars for two nights and stay at the Desert Study Center at Zzyzx for the last four evenings.

Pretrip meeting: Mar. 28, 7-9 pm  
Trip: April 9-15 (Saturday-Friday)  
Cost: \$250 members/\$275 nonmembers

### Ethological Evidence

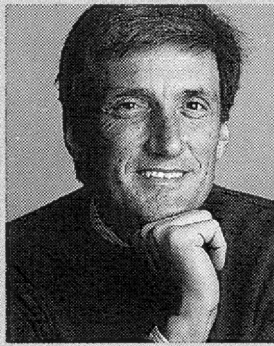


Ethology is the study of animal behavior. Join

Luis Baptista as he focuses on the behavior of insects, fish, lizards, mammals and birds. Topics include behavioral development, whether behavior is inherited or learned, and the evolution of behavior that enables animals to feed, flee enemies, court, reproduce and communicate.

Mar. 24 to Apr. 21  
(5 Thursdays), 7-9 pm  
Cost: \$65 members/\$75 nonmembers

Preregistration required. For more information on these and other offerings, call 750-7100.



Susan Middleton

## Dear Members

This spring will mark my fifth year as director of the Academy. After much thought, I have decided to leave the Academy this May.  
As you know from your exposure to all of the Academy's programs, the Academy is a wonderful institution and I have been extremely proud to serve as Director. I feel, however, that change is a constant in dynamic institutions, and periodically that change should include staff leadership.

I inherited a strong institution from my predecessor, Dr. Frank Talbot, and with strong board support have sought during the last five years to reinforce the institutional mission. Additionally, I have sought to help the Academy recognize and adapt to changing social, economic and political factors which affect nonprofits today. Presently, I believe the Academy has a dedicated staff and a clear sense of mission.

At this time the Academy is poised to move into a role of increased importance in scientific research and education. Now is the best time for new leadership to capitalize on the wonderful qualities of this institution. A Trustee committee has begun its process, and we are hoping to select the next director by late spring or early summer.

Roy Eisenhardt

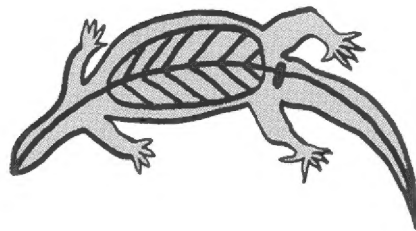
## TRADITIONAL ARTS

### Philippines Dance

The Palabuniyan Kulintang Ensemble performs courtship and celebratory dances from the rural Muslim areas of Mindanao, accompanied by *kulintang* (gong) music. African Hall — Mar. 5

### Australian Didgeridoo

Stephen Kent performs on the Australian *didgeridoo* – an Aborigine wind instrument fashioned from a eucalyptus branch



hollowed out by termites. He also will demonstrate the circular-breathing techniques that produce the characteristic drones of didgeridoo music. Auditorium — Mar. 12

### Navajo Silverwork

Visiting the Bay Area from Arizona, Navajo artist Debbie Silver-smith demonstrates the methods of traditional

Navajo jewelry. Cowell Hall. — March 16-20, daily 10 am to 5 pm

### Music from the Andes

Kashwa, a company of talented musicians from Peru and Ecuador, performs Andean folk melodies on bamboo flute and panpipes (*quena, zamponas*), string instruments (*guitar, charango, bandolin*), rain sticks, and drums (*bombo*); with songs in Spanish, Quechua, and Aymara. Auditorium — Mar. 26

Explore cultural traditions from around the world, Saturdays at 1 pm. Free after general admission. Call 750-7163, for more information.





THE  
ACADEMY  
STORE



While visiting the STAR TREK®: Federation Science exhibit, don't forget to stop by our special Starfleet Store for official communicator pins, collectors plates, Bajoran earrings and other out-of-this-world STAR TREK merchandise that will delight the trekker in all of us.

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MARCH

SUNDAY

MONDAY

TUESDAY

WEDNESDAY

THURSDAY

FRIDAY

SATURDAY

CURRENT EXHIBITS:

Black Achievers in Science, through Apr. 17  
Star Trek®: Federation Science, through May 1  
Hands on Science, through Sep. 5  
Birds of a Feather, through Sep. 5

6

7

FISH ROUNABOUT  
closed for repairs  
until spring

13

Supercussion  
(Young Audiences)

14



DOLPHIN FEEDINGS  
are at 10:30 am,  
and 12:30, 2:30  
and 4:30 pm  
every day

21

28 Members preview  
of Star Trek exhibit  
(Membership)

27

1

PLEASE BRING  
your membership  
card when you visit the  
Academy

SCIENCE IN ACTION

Children's presenta-  
tions, Sunday-  
Friday, 11 am; Earth  
Celebrations on  
Saturdays, 12:30 and  
3 pm (this month's  
topic: the Conifer  
Forest)

22

Window on  
the Universe :  
Ultraviolet  
Explorer Satellite  
(Planetarium)

29

Members preview  
of Star Trek exhibit  
(Membership)

2

Free Day  
First Wednesday  
of each month  
Sky show, 1994  
Almanac, closes

9

The Promise of  
The Rain Forest,  
(Members Meeting)  
Science: The Final  
Frontier (Lectures)

16

Navajo  
Silverwork,  
through the 20th  
(Traditional Arts)

23

PLANETARIUM  
SKY SHOWS  
on weekdays  
at 2 pm

30

Black Holes,  
Space Warp and  
Time Machines  
(Lectures)

3

SPECIALTY TOURS  
Free one-  
hour tour:  
Tuesdays,  
Aquarium;  
Wednesdays,  
Life Through  
Time;  
Thursdays,  
Wild California;  
all at 1:30 pm

10

17

Bay Area Science  
Fair on display  
through the 23rd  
African Hall/Annex  
& Birds of a  
Feather closed  
until 3 pm

24

31

The Ecology of  
Commerce  
(Lectures)

4

PENGUIN FEEDINGS  
are at 11:30 am  
and 4 pm  
every day

11

18

PLANETARIUM  
SKY SHOWS  
on weekends  
at 11 am,  
and at 12, 1, 2,  
3 and 4 pm

LASERIUM SHOWS  
Thursday-Sunday,  
evenings,  
call 750-7138

5

Philippines Dance  
(Traditional Arts)  
Sky show, Galileo's  
Universe, opens  
Foods for the Future Sym-  
posium (Anthropology)

12

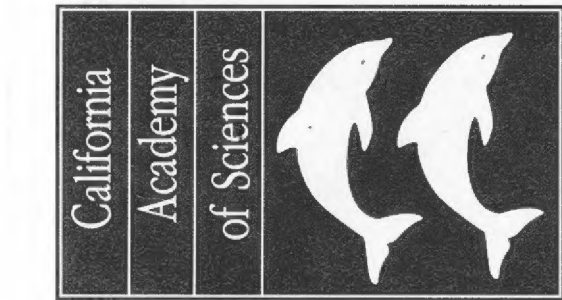
Australian  
Didgeridoo  
(Traditional Arts)

19

African Hall/Annex  
& Birds of a  
Feather closed  
until noon for  
Science Fair

26

Music from the  
Andes (Traditional  
Arts)  
Costumes From the  
Cosmos kid's  
contest (Education)



The Academy includes the  
Natural History Museum,  
Steinhart Aquarium and  
Morrison Planetarium.  
Open every day of the year  
from 10 am to 5 pm.

VISITOR SERVICES

Academy Information: 415-750-7145  
Academy Store: 750-7330  
Admissions: 750-7159  
Aquarium: 750-7247  
Biodiversity Center: 750- 7361  
Development Office: 750-7216  
Docent Tours: 750-7155  
Education Office: 750-7100  
Group Information: 750-7043  
Job Hotline: 750-7333  
Laserium: 750-7138  
Lectures: 750-7128  
Library: 750-7102  
Membership Office: 750-7111  
Planetarium: 750-7141  
Planned Giving: 750-7216  
Security: 750-7000  
Switchboard: 221-5100  
Travel: 750-7348  
Volunteer Services: 750-7154  
Weekend Information: 750-7375

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COUPON FORM

LECTURES	Qty/Mem.	Qty/Normem.	Total
Science: The Final Frontier / Mar. 9 Lecture	x \$6	x \$8	=
Reception and Lecture	x \$30	x \$35	=
Black Holes, Space Warps and Time Machines / Mar. 30	x \$6	x \$8	=
The Ecology of Commerce / Mar. 31 Lecture	x \$6	x \$8	=
Reception and Lecture	x \$30	x \$35	=
Brown Bear/Human Interactions / Apr. 6	x \$6	x \$8	=
Animal Play in Biological Perspective / Apr. 12	x \$6	x \$8	=
Sacred Peaks of East Africa: Mount Kenya & Kilimanjaro / Apr. 14	x \$6	x \$8	=
TOTAL \$			
MORRISON PLANETARIUM	Quantity	Total	
Window on the Universe: Ultraviolet Explorer Satellite / Mar. 22	x \$2	=	
Comet Shoemaker-Levy 9's Collision Course with Jupiter / Apr. 19	x \$2	=	
First Light Science: Keck Telescope / May 17	x \$2	=	
Beyond the Womb of Earth / Jun. 7	x \$2	=	
TOTAL \$			
DONATIONS			
I would like to support the Academy's work with a donation.		\$	
TOTAL PAYMENT ENCLOSED		\$	

PAYMENT METHOD

(Check one) ☐ Check ☐ VISA ☐ MasterCard ☐ American Express  
Credit card charges gladly accepted over \$10.

Card# Exp. Date

Signature

MAKE CHECK PAYABLE TO: C.A.S. and mail with this coupon form to:

Membership Office, Ticket Services  
California Academy of Sciences, Golden Gate Park, San Francisco, CA 94118  
Daytime Phone

Include a self-addressed, stamped envelope for each series for which you subscribe.  
No refunds/exchanges.